CHARLES ELMORE

Supreme Court of the United States

OCTOBER TERM, 1936.

Nos. 35 and 36.

SAMUEL B. SMITH,

Petitioner,

vs.

A. B. HALL and L. C. HALL; d. b. a. HALL BROTHERS,

Respondents.

SAMUEL B. SMITH,

Petitioner,

vs.

JAMES MANUFACTURING COMPANY and ELMIRA HATCHERIES, INCORPORATED,

Respondents.

REPLY BRIEF FOR PETITIONER.

CHARLES NEAVE,
DEAN S. EDMONDS,
ALBERT L. ELY,
Counsel for Petitioner.

ACKERMAN PRESS, Inc., 143 Liberty St., 'Phones Rector 2-6356-7

SUBJECT INDEX.

	PAGE
The Issue Now Presented	1
General Principles Bearing on this Issue	3
Evidence Offered in Support of the Hastings Defense	7
"The Dollar Hen"	10
The Davis Incubator	14
Hastings' Abandoned Patent Application	18
The Muskogee Incubator	25
The ~~Hicker~~ Hitkox Photographs	27
No Proof of Staged Incubation in Individual Chambers	28
An Operative Failure	35
Answers to Miscellaneous Points in the Brief of Respondent Hall	38
Other References to Matters Not in the Record	40
Alleged Insufficiency of Smith Patent	42
Infringement	46
Air Currents	46
Staged Incubation	47
18-Day Operation	47
Petitioner's Contentions in Prior Litigations	48
The Canadian Decision	51
Comparative History of Smith and Hastings	58

CASES CITED.

PAGES

Alexander Milburn Co. v. Davis, 270 U. S. 390, 401 ... 23, 24

Buckeye Incubator Co., et al., v. Blum, N. D., Ohio, 17 F. (2d) 456 ... 49, 50
Buckeye Incubator Co., et al., v. Blum, C. C. A. 6, 27 F. (2d) 333 ... 49, 50
Buckeye Incubator Co., et al., v. Cooley, D. C., N. J. (not reported) ... 8, 9, 13, 18, 38, 39, 48
Buckeye Incubator Co., et al., v. Cooley, C. C. A. 3, 17 F. (2d) 453 ... 8, 9, 13, 48, 51
Buckeye Incubator Co., et al., v. Hillpot, D. C., N. J., 22 F. (2d) 855 ... 49, 50
Buckeye Incubator Co., et al., v. Hillpot, C. C. A. 3, 24 F. (2d) 341 ... 49, 50
Buckeye Incubator Co., et al., v. Petersime, D. C., S. D., Ohio (not reported) ... 50
Buckeye Incubator Co., et al., v. Petersime, C. C. A. 6, 19 F. (2d) 721 ... 49, 50
Buckeye Incubator Co., et al., v. Stone, D. C., Oregon (not reported) ... 49
Buckeye Incubator Co., et al., v. Wolf, D. C., N. D., Ohio, 291 Fed. 253 ... 9, 13, 23, 48, 49

Cohn v. U. S. Corset Co., 93 U. S. 366-370 ... 13
Corn Planter Patent Case, 23 Wall. 181 ... 23, 24

Eames v. Andrews, 122 U. S. 40-66 ... 13

His Majesty the King v. Smith Incubator, Exchequer Court and Supreme Court of Canada ... 51

PAGES

Seymour v. Osborne, 11 Wall. 516-555 ——— 13
Smith v. Hall, D. C., Conn. (not reported) ——— 8, 9, 39, 41
Smith v. Hall, C. C. A. 2d, 83 F. (2d) 217 ——— 8, 9
Smith v. James, D. C., W. D., N. Y. (not reported) ——— 8, 9
Smith v. James, C. C. A. 2, 83 F. (2d) 221 ——— 8, 9
Smith v. Le Mieux, D. C., E. D., Wis. ——— 41
Smith v. Sims, D. C., S. D., Ind. ——— 8
Smith v. Snow, 294 U. S. 1 ——— 1, 2, 7, 34, 38, 45, 49, 50, 51, 56, 59
Smith v. Street, D. C., D. Minn. ——— 8
Smith v. Waxham, D. C., S. D., Calif. (not reported) ——— 42, 49
Snow v. Smith, C. C. A. 8, 70 F. (2d) 564 ——— 49, 50

Waxham v. Smith, C. C. A. 9, 70 F. (2d) 457 ——— 42
Waxham v. Smith, 294 U. S. 20 ——— 1, 2, 7, 42, 45, 47, 49, 50, 51, 58

Wolf v. Buckeye Incubator Co., C. C. A. 6, 296 Fed. 680 ——— 9, 13, 48

IN THE

Supreme Court of the United States

OCTOBER TERM, 1936.

Nos. 35 and 36.

SAMUEL B. SMITH,

Petitioner,

vs.

A. B. HALL and L. C. HALL, d. b. a. HALL BROTHERS,

Respondents.

SAMUEL B. SMITH,

Petitioner,

vs.

JAMES MANUFACTURING COMPANY and ELMIRA HATCHERIES, INC.,

Respondents.

REPLY BRIEF FOR PETITIONER.

The Issue Now Presented.

There is but one real issue presented here, *i. e.*, the validity of the Smith patent in view of the Hastings incubators, publications, and patent application. Arguments of non-infringement are presented, but they are arguments which were considered and rejected by this Court in the *Snow* and *Waxham* cases, except for the so-called "18-day" de-

fense which is so devoid of substance as to require only brief comment.

As to validity, the Smith patent has been before the Courts substantially continuously since 1923 and its validity was sustained in every instance up to the Court of Appeals' decision in the present cases. The *scope* of the protection afforded by the patent was the subject of differing Court decisions, with the result that the patent came before this Court for final determination of its scope in the *Snow* and *Waxham* cases. In deciding that issue of scope, this Court reviewed the art of incubation, determined the stage of evolution to which the art had progressed prior to Smith, ascertained and defined the nature and essentials of the Smith invention, and commented on the revolutionary effect which the Smith invention had upon the practical art of incubation. Thus, while the *Snow* and *Waxham* cases presented to this Court only issues of infringement, the determination of those issues led to declaring the Smith patent valid. This Court stated that Smith's method was novel and involved invention, that Smith was entitled to and received broad claims, and that those broad claims were entitled to a liberal construction.

This striking and revolutionary change in the practice of the art of incubating was defined by this Court as consisting of the combination of arranging the eggs for staged incubation as defined in the opinion* and applying to the staged eggs mechanically circulated currents of air of sufficient velocity so that in passing over eggs in different stages of incubation the temperature of the eggs throughout the chamber would be equalized, combined with gradual replacement of foul air with fresh air so that the essential moisture of the eggs is conserved.

The invention lies in the *combination* of these elements in a single operation. The omission of any one element

*"Staged incubation is the successive setting of eggs *in the same cabinet* at brief intervals, of about three days" (Snow opinion, p. 5).

defeats the purpose. If the eggs are not set in a single room in staged incubation as defined by the Court, a preponderance of hot (or cold) eggs will create conditions which any amount of air in circulation cannot remedy. If the eggs are set in staged incubation, and the air current is insufficient, failure will follow. And if the amount of fresh air entering the incubators is not restricted, failure will come from excessive drying out of the eggs.

The issue of *validity* now presented is whether or not the striking revolutionary advance in the art brought about by the invention so defined was made by Smith or by Hastings.

General Principles Bearing on this Issue.

It would seem that if an invention of such importance and effecting so revolutionary a change had been made by Hastings, some distinctive and easily recognizable manifestations of practical achievement would be apparent in the history of Hastings' efforts. Instead, the most distinctive feature of Hastings' efforts, individually or collectively, is their utter failure to attain anything of commercial significance. Not only once, but in three separate efforts he tried to build and operate a commercially useful incubator, and each effort was a failure and was abandoned because it was a failure. Nothing whatever of commercial value evolved from any one or all of them, and such investment as was made in each instance was lost in its entirety.

Nothing approaching explanation for the failure of these three successive efforts has been offered. For instance, there is no suggestion that Hastings' opportunities for demonstration of the value of his ideas was limited by inadequate funds. It appears that in each instance he was free to build as he wanted to build and operate as he wanted to operate, subject to no restrictions by reason of cost or by the desire of others to have their ideas incor-

porated. Thus each of his three incubators gave Hastings full opportunity to demonstrate achievement in mass incubation and their failure demonstrated that nothing had been achieved.

No contemporaneous records are now presented of eggs hatched in Hastings' incubators from which one could deduce that some measure of success was secured. Incubators which would hatch eggs were then known and in wide use. Possible improvement lay in hatching on a larger scale, or at less cost, or with a larger percentage of chicks from the eggs treated. No contemporaneous record of results obtained along any one of these lines has been presented, and the oral testimony given from memory ten or twenty years after the event is vague and variable, does not touch on cost of incubating, and asserts no improvement in percentage of hatch.

No contemporaneous record of the construction or operation of the Hastings incubators has been presented dealing with the critical items entering into the invention under consideration. The only contemporaneous drawing of any kind illustrating the construction of a Hastings incubator is that of the Hastings application and it shows a construction by which the air currents would be effectively suppressed. As filed there was no mention of staged incubation and in the subsequent papers there is no adequate description of that essential.

Hastings himself tried to operate each of his three incubators in the practice of mass incubation and he failed. Each effort to operate was confined to a short period, whereupon Hastings departed and shortly thereafter the incubator was abandoned and dismantled. Practical results of any value whatever were conspicuously absent.

An application for patent was filed. Even under the liberality that characterizes the treatment of such applications by the Patent Office, nothing new and inventive was

recognized. The application was rejected repeatedly and then that too was abandoned.

The only other items to be considered are the publications. They were written for popular appeal, they are obviously extravagant, exaggeration in them is admitted, and description of specific construction and operation does not appear in them.

With these as the broad lines of the condition presented, this Court is solicited to hold that it was Hastings, not Smith, who was responsible for the revolutionary change in the art of incubation resulting from the invention whose elements this Court has heretofore defined. We submit that, in order to hold with Respondents that it was Hastings who made the invention, it would be necessary for this Court to find that Hastings demonstrated his possession of the invention by building an incubator embodying it and operating that incubator successfully, or that he disclosed the invention in publications so clearly and fully that others following his published directions would employ it successfully. What Hastings did prior to the Smith invention would have to constitute what is known in patent law as a reduction to practice and an essential of reduction to practice is utilization of the invention in an operation which is sufficiently successful to demonstrate the value of the invention, or clear and complete disclosure of it in a publication.

The incubators built and operated by Hastings certainly do not suffice as such a demonstration. It is not suggested that any one profited financially or otherwise from what Hastings did. It is not suggested that anyone was led by what he did to conclude that some desirable goal in incubation could be reached by extending or developing his abortive efforts. The failure in each instance was too complete to tempt any one in any such direction.

It is not sufficient that Hastings was proceeding in the direction of the invention. The requisite is that he must

have proceeded so far as to demonstrate the value of the invention so that he or others would be led thereby to proceed further to ultimate success. On the records here presented, it is impossible to conclude, in accord with established principles, that any one of the incubators built and operated by Hastings was a reduction to practice of the invention.

As to publications, they could support a claim of prior invention and prior disclosure and thus be the equivalent of an actual reduction to practice only if they contained clear expositions of the invention. They would have to present the invention so completely and with such clarity as to warrant the conclusion that by those publications the public was put in possession of the invention. Nothing approaching that degree of certainty and clarity appears in the Hastings publications.

Nowhere in the publications, any one of them or all of them together, is there clear statement of the primary essentials of the invention under discussion, either staged incubation as defined in this Court's opinion, or the maintenance of a definite circulation of air at a velocity sufficient to effect the required transfer of heat and the maintenance of the necessary humidity and fresh air conditions. Only if there were certainty in the disclosure of these essentials of the invention so that the public could be said to have been put in possession of the invention by the publications could they be said to suffice as disclosures substantiating Respondents' claim. As this Court has so frequently said, the defense here urged requires certainty, not conjecture.

These Respondents say, and the Court of Appeals said, that the Hastings defense is presented more fully in the instant cases than it was in the prior ones. Respondents say also that petitioner is now contending for an interpretation and application of the Smith patent different in some material respect from that for which it contended in the

litigations prior to the decisions of this Court in the *Snow* and *Waxham* cases. Respondents also direct attention to a recent decision of the Supreme Court of Canada sustaining the Hastings defense and overruling a decision rejecting it by the Exchequer Court of Canada. Respondents maintain also that the incubators which they made and sold and used prior to the expiration of the Smith patent are not infringements. We therefore proceed with presentation of brief discussion of these four topics, together with reply to Respondents' contentions on the main issue of invalidity of the Smith patent by reason of prior invention, use, and publication by Hastings.

Evidence Offered in Support of the Hastings Defense.

Respondents and the Court of Appeals say that the proofs offered in support of the Hastings defense are substantially more complete in the instant cases than they were in the prior suits. We think that it is an item of minor consequence because the more complete the proofs are, the more thoroughly do they expose the failure of Hastings' efforts. But apart from that, the subject of the completeness of the proofs has significant aspects which make it worthy of brief comment.

The varying quantities in which the Hastings proofs have been offered in these litigations to date represent the differing views of different counsel representing different defendants as to what selection of Hastings' items of proof presents the Hastings defense in its strongest light. It is easy to perceive that one counsel for a defendant might think it better to keep Hastings off the witness stand since plaintiff could so easily prove by him the failure and abandonment of his several attempts at mass incubation. Another might advocate omitting the abandoned patent application because it was abandoned and because it is too apt to be regarded as encompassing the sum total of Hastings' novel ideas on the subject of mass incubation in 1911. Another might advocate omitting the "Dollar Hen" because

Hastings once called it an "impractical poultry book". The selection of the items of proof offered in the prior suits followed the lines thus indicated.

The cases at bar illustrate this still further. Counsel representing *Hall* evidently thought that Hastings' attempt at Muskogee was useless as defense material, or at least was deficient as compared with the Hastings effort at the Davis farm. Therefore the Hastings proofs in the *Hall* case are confined almost entirely to the Davis episode. On the other hand, counsel representing *James* took the opposite view and so we find in the *James* case that the Hastings proofs are confined almost entirely to the Muskogee episode.

These two cases, tried in different District Courts before different Judges and at different times, came on for argument together in the Court of Appeals and the two records were considered as one. In sustaining the defense, the Court of Appeals said this is the first time it has been "so fully presented and substantiated", and Respondents have seized on this as an aid in avoiding the effect of the numerous prior decisions rejecting it. Therefore what is specified by Respondents as the new evidence may well be considered from the standpoint of whether it adds anything to the *substance* of the proofs or only to the quantity.

It has abundantly appeared that Hastings testified in person in the *Cooley* case, and, in fact, in the *Sims* and *Street* cases. It appears on page 54 of the *Hall* record that in so doing he made more money than he had made in all of his attempts to practice mass incubation. Davis also testified in the *Cooley* case.

It is pointed out that Mrs. Davis testified as to the Brooklyn incubator and had never testified before. The testimony she gave appears to be entirely adequate explanation of why she had not testified before. She could give no first-hand evidence of consequence and what little she did give was said by the District Court Judge to be "largely hearsay" (Hall R. p. 216).

It is said that the original Hastings blower used at Muskogee was produced for the first time. Whether it was the one actually used at Muskogee is open to question, but assuming it is, it is of little consequence. No one representing Petitioner has ever denied that the Muskogee incubator was built and was operated in some fashion and employed a fan of some sort when so operating.

Next, it is said that Hastings and Lieber, his associate and backer at Muskogee who testified in the *Stone* case, developed the pertinent facts in greater detail than they had been previously. But it appears that they had developed the facts in sufficient detail in the previous cases, and the presentation of the greater quantity in this instance brought with it many contradictions and discrepancies.

Emphasis is given to the fact that several people, notably Hickox, who knew something about the Muskogee installation and who had not appeared in any of the prior cases, gave testimony in support of Hastings in this *James* case. But no one of them supplied any additional information on the items which are the only ones of importance, namely, how the Muskogee incubator was constructed, how it was operated, and what number of chicks was hatched from any stated number of eggs. Hickox produced an album containing photographs of the Muskogee incubator, but most of these photographs, and indeed the more important ones, were reproduced in the publications which were in the other cases.

It is suggested, though not stated directly, in the Court of Appeals opinion that the "brief" filed in connection with Hastings' abandoned application for patent was not considered in the prior litigations. The fact is that this brief along with all other papers filed in the Patent Office with Hastings' abandoned application were before the Courts in both the *Wolf* and *Cooley* cases.* The

*Counsel for Respondent Hall endorse the erroneous statement of the Court of Appeals of the Second Circuit at pages 5 and 13 of their Supplemental Brief.

very documents offered in evidence by the defendant in the *Hall* case were taken from the record in the *Cooley* case and the opinion of Judge Westenhaver in the *Wolf* case refers not only to the abandoned application itself but also to the "ingenious appeal of able patent counsel". (291 F. 253-9)

Finally, it is said that additional publications were presented for the first time, but this is accompanied by no claim that the additional ones add anything other than quantity, and it will be noted that Respondents' discussion of the Hastings publications is discussion of the ones which were in the earlier cases.

Thus, there is no substance to the assertion of Respondents and the Court of Appeals that the Hastings defense is any stronger than, or even different from what it was in the prior suits where it was rejected, except as it may be said to be weaker by reason of the additional contradictions and discrepancies it has developed.

We proceed now with more specific reply to Respondents' contentions on the principal items of the Hastings defense.

"The Dollar Hen."

The part of "The Dollar Hen" upon which Respondents appear to base their contention that "staged incubation" is there disclosed, is the statement that the hatching room is equal to only a fractional portion of the capacity of the *entire* incubator; one-sixth or one-third. It is argued from this that Hastings must have contemplated staged incubation. But that would be true only if it appeared that Hastings contemplated using one incubating or "egg chamber" and the contrary clearly appears in the portion of Hastings' book quoted on pages 15-16 of Respondent James' brief, which therefore defeats Respondent's contention. In that quoted matter are repeated references to "egg chambers" and "egg rooms". Thus, the incubator indicated in this article consisted of a plurality of egg chambers each of which may have had the same capacity

as the one hatching chamber, and the operation involved setting each chamber at one time and thus securing weekly or semi-weekly deliveries without practicing staged incubation. It is just such a construction and arrangement as this that Hastings employed later at Muskogee.

Furthermore, Hastings describes in the preceding pages of "The Dollar Hen" under the heading "The Future Method of Incubation" an incubator of the "single big room" type which he said had "fallen down". On page 104 Hastings refers to a "mammoth" incubator consisting of a row of box incubators supplied with a single heating system. It is immediately following this that he describes his new proposal and makes reference to the "egg chambers" and "egg rooms", which is further reason for concluding that he proposed an incubator consisting of several chambers or rooms additional to the hatching chamber in each of which a single setting of eggs would be treated through the whole incubating operation.

This procedure was in accord with the common commercial practice of that day. Had Hastings contemplated any departure from that established practice, such as setting a fractional part of the capacity of an egg chamber at intervals of three or four days, description of that departure would have been made clear and explicit. In the absence of such explicit statement that the eggs in the several chambers were to be set in staged incubation, no one would have gotten the suggestion of any such arrangement at that date.

Nor does it follow that Hastings' reference to uneven temperatures in the egg chambers signifies staged incubation. With eggs of the same age in a single room, unevenness of temperature may result. This is described in the "Poultry Culture" article (James R. p. 1115) where Hastings, in referring to the setting of the eggs (not in staged incubation) in superimposed trays, said that

> "the heated air rose causing a stratification or vertical difference in temperature of about 2° per ft."

Hastings' description of his proposed incubator in "The Dollar Hen", vague as it is on all features of construction and operation, appears to be concerned with the maintenance of the proper moisture conditions. In the paragraph towards the bottom of page 105 he describes two air streams, in one of which the air would be made moist by "sprinkling", and in the other of which the air would be "dried with deliquescent salts" in accordance with known cold storage practice. The air admitted to each of the several egg chambers was to be derived from these two sources in proportions governed "by electrically moved dampers which switch a greater or less proportion of the incoming current of the sprinkler or dryer as the case may be". To this is added a reference to "temperature dampers" which are also to be "electrically moved" under the automatic control of an "ordinary incubator thermostat", but these features of the construction and operation are not elucidated further.

The summary of this "Dollar Hen" disclosure therefore is this:

No drawings of any kind are included; the description is altogether vague and indefinite as to both construction and operation; nowhere is there any explicit reference to staged incubation, or to any other departure from the then established practice of setting an egg chamber to its entire capacity at a time; nowhere in it is there any reference to utilizing a definite circulation of air for effecting transfer of heat from old eggs to new ones; and as to the maintenance of the proper fresh air and moisture conditions, not only is there no suggestion of continuous discharge of old air and continuous intake of fresh air in restricted amounts, but instead a complex system of sprinklers and deliquescent salts and electrically moved dampers is suggested without sufficient description of them to inform one how they are to be employed.

Thus, this "Dollar Hen" is altogether too vague and indefinite* to permit of saying that it informed the public of the invention here in issue. Furthermore, this publication has been before the courts since the inception of the litigation on the Smith patent. In the *Wolf* case, Judge Westenhaver said

> "The earliest article in the 'Dollar Hen' may be disregarded as Hastings there merely describes a process for maintaining temperature in cold storage and suggests how it may be applied in a hatchery. It does not purport to describe an apparatus or ever to have been put to any use" (291 Fed. 253-257).

The Circuit Court of Appeals of the 6th Circuit, in its affirmance of Judge Westenhaver, likewise must have regarded this publication as insufficient to constitute anticipation.

Judge Bodine in the *Cooley* case was fully advised as to "The Dollar Hen" and his conclusion was that

> "Hastings' testimony added little to his published articles" (Appendix, p. ii).

The affirmance of Judge Bodine by the Circuit Court of Appeals of the Third Circuit shows the reaction of that Court to "The Dollar Hen".

Hastings himself evaluated this publication as an "impractical poultry book" (James R. p. 578-9). Hastings also admitted that Judge Westenhaver's analysis of this

---

*"It must be admitted that, unless the earlier printed and published description does exhibit the later patented invention in such a full and intelligible manner as to enable persons skilled in the art to which the invention is related to comprehend it without assistance from the patent, or to make it, or repeat the process claimed, it is insufficient to invalidate the patent." Cohn v. U. S. Corset Co., 93 U. S. 366-370.

Eames v. Andrews, 122 U. S. 40-66.
Seymour v. Osborne, 11 Wall. 516-555.

publication, as quoted above, was correct. Hastings had but the haziest notions on the subject of incubation when he wrote this book, his ideas not having advanced beyond the mere transposition of Cooper's cold storage process to incubation. To contend that Hastings, at the date when this article was written and before he had tried out his ideas, had grasped every essential of the solution of mass incubation, is contrary to Hastings' own testimony at page 540 of the James Record, and is directly contradictory of the testimony which reveals that when he set about putting his ideas into practice, he failed.

The Davis Incubator.

On page 19 of Respondent James' brief is the statement that the Davis incubator at Brooklyn operated "during the season of 1910 and spring of 1911", and at page 20 that this incubator "operated through the hatching season of 1910 and 1911 and also during the next season".

The Davis incubator was not built until February, 1911 (Hall R. p. 52); it could not have been operated during the hatching season of 1910, and there is no proof in either record that it was operated "during the next season". In their Supplemental Brief (p. 18), Counsel for Respondent Hall stretch the evidence still further, saying that this incubator was used "until 1913".

The facts that Hastings filed an application for patent in 1911, and sought to secure capital to finance further experimentation, and published "The Million Egg Incubator" to aid the financing, mean nothing as to the success of the Davis incubator. "The Million Egg Incubator" contains at least one admitted falsehood to lure capital (James R. p. 554-5; Hall R. p. 55-6), and the letters contained in it may have been equally false and misleading, for the purpose appears to have been to exaggerate Hastings' accomplishment. The statements in these letters written at the behest of Hastings have no value as proof of the facts stated; we call attention again to

the fact that Orvis who wrote one of the letters was not called as a witness for either Respondent, from which it should be assumed that, if called, he would not have supported the statements.

It appears from the text of the letter that the basis for Orvis' statements was a single visit of one day only and he might have been there at a time when one hatch was coming off and another was being put in. If such were the case, Orvis could not have testified that Hastings was practising "staged incubation."

On page 6 of Respondent Hall's brief it is stated that the testimony of Mrs. Davis was that she "repeatedly inspected the incubator and observed both eggs and hatched chicks in staged incubation in the superimposed trays thereof during its operation." No record reference is given for this statement. The fact that she testified that she saw both eggs and chicks is not proof that staged incubation was being practiced, for at the time that she saw the incubator it may well have been that the eggs were just beginning to hatch. It is obvious that her testimony as to staged incubation was suggested to her and she founded her testimony solely upon the fact that eggs were received at intervals, and, as pointed out by the District Court, there is nothing to show whether the eggs were set in the Hastings incubator or the old-style "Cyphers" incubators which were being operated at the same time. The comments of Judge Hincks who listened to the witness testify and observed her deportment are quoted on page 27 of our main brief and appear in the Hall record at page 217.

On pages 10 and 11 of its brief, Respondent Hall quotes selected passages from the Hastings' file wrapper in an attempt to show that staged incubation was practised at Brooklyn, without calling attention to the dates on which those passages were written and filed. Only the first two passages appeared in the application as filed and the others did not make their appearance until long after Hastings

left Brooklyn, so the later passages furnish no corroborative evidence as to what happened in Brooklyn.

On page 12 of the Hall brief, the assertion is made that the notary who administered the oath and the witnesses to the original specification and drawings all knew about staged incubation from the fact that their names appear upon the application. Quite the contrary must be the fact, for the application as it was executed and witnessed by these persons contained no disclosure whatever of staged incubation (Hall R. p. 55).

On page 75 of the James brief it is stated that Hastings removed the fabric enclosures around the incubating chamber after a brief trial at the Davis plant. It is admitted that Hastings had the fabric in place when he started operations, but there is no corroboration of his statement that later he either removed the fabric enclosures or substituted something else for them.

Hastings application for patent was filed by him toward the close of his experiment at the Davis farm and it is reasonable to assume that he would not have shown the fabric enclosures unless he was using them. In that application he illustrated the fabric enclosures in his drawing and described them in his specification as a means for distributing the air uniformly, and he claimed them as essential elements of his invention (James R. 745-8).

This drawing in the Hastings application is the only contemporaneous drawing illustrating the construction of any Hastings incubator, and as to contemporaneous records of the production of chicks in a Hastings incubator, there are none.

The records before the Court contain numerous references to comparative tests run at the Davis farm between the Hastings incubator and the Cyphers incubators which were in operation there (James R. p. 550 and Hall R. p. 62), but no record of any one of these tests is produced. Hastings undertook to state from memory, fifteen or twenty years after the event, what the comparative tests

showed, and what he said is illuminating. He was totally unable to be specific as to the results obtained in percentage of chicks produced from specific numbers of eggs, and nowhere did he claim that his results were any more favorable than those obtained with the old Cyphers incubators. In fact, he stated specifically that his results were about the same. A typical statement is (Hall R. p. 52) that his operation.

> "was as successful as the previously used incubators that Mr. Davis had. I do not recall what was the percentage of the hatches."

Thus, the most that Hastings asserted was that his results were as good as those obtained from Davis' old Cyphers incubators and Davis said that he did not have "very good luck with the Cyphers" (Hall R. p. 58).

As to the letter signed by Davis and quoted on pages 22-23 of Respondent Hall's brief as Exhibit D-C in the Cooley case, when Davis was on the stand in the Hall case he was not questioned with regard to this letter nor was it offered in evidence. It is apparent that at the request of Hastings, Davis was violently exaggerating the percentage of hatch obtained in the Hastings' hatchery when he wrote that it "surpassed the results from competing Cyphers incubators" and was as high as "86 per cent."

The allegations at page 27 of the Hall brief that the thousands of customers for Sunday dinners at the Davis roadhouse saw the incubator is wholly without support in the record. We refer to pages 30 and 31 of our main brief on this point. Not a single customer was brought forward to testify as to having seen or even heard of the Hastings incubator which was in the cellar of the roadhouse carefully guarded from view because Hastings had not filed his application for patent. The booklet entitled "Davis Poultry Farm" (Deft.'s Ex. G) was merely an advertising folder of this farm and contains no reference whatever to the Hastings' incubator.

The attempt to establish a "sale" of the Brooklyn incubator to Davis found on pages 28-29 of Respondent Hall's brief is based solely upon the circumstances that Davis paid for the building of the incubator and gave Hastings a small salary while he was working on it in return for which he was given an unlimited license to use the "invention". The fact that Davis burned up the incubator "along with a bunch of other trash" (*Hall* R. p. 61) when he moved out of the place and never made any attempt to exercise his license shows his estimate of the worth of the incubator and the license.

One further point about the Hastings' Davis incubator is the reference to it on page 6 of the James brief which is significant in itself and also in its reflection of the brief as a whole. It is stated that Judge Bodine referred to the Davis incubator in his unreported opinion in the *Cooley* case and concluded that "a complete anticipation is indicated". What Judge Bodine wrote in his opinion is

> "In the present-day description of this hatchery" (the Davis hatcher) "and the drawings now made, a complete anticipation is indicated" (Appendix, p. ii).

and he continued with a spirited rejection of the Hastings defense. The sarcasm of his reference to a *present-day* description and drawings *now* made was either lost upon or ignored by counsel. The same obtuseness appears upon page 14 of the Supplemental Brief filed on behalf of Respondent Hall. The drawings mentioned by Judge Bodine were nicely executed drawings made on the eve of the trial of the *Cooley* case. Later in his opinion Judge Bodine said:

> "It seems impossible that the methods disclosed in his" (Hastings) "drawings should not bear a resemblance to Smith's successful incubator rather than his" (Hastings) "failures" (Appendix, p. vii).

Hastings' Abandoned Application.

We have fully discussed the various statements in the file history of the Hastings application and pointed out

that they are in conformity with the procedure which Hastings actually practiced at Muskogee, namely, the setting of each chamber to its full capacity with eggs of the same age and the progressive advancement of temperatures in the seven different chambers as incubation was advanced in the eggs in those chambers.

In the James brief an attempt has been made to read into the application as filed a disclosure of staged incubation. Counsel have overlooked the admission by Hastings himself that "there is no disclosure of staged incubation in that application as I signed it in April, 1911" (Hall R. p. 55). The statement on page 23 of the James brief that "the only source of uneven temperature would be eggs of different ages" is unwarranted. As noted above (p. 11), in any closed chamber there will be variations in temperature because hot air emanating from a full compartment of hot eggs will rise and cause stratification of the air by temperatures. The fact that this application speaks of unevenness of temperature is no indication that the applicant had in mind staged incubation.

The selected passages from the file wrapper of the Hastings abandoned application to which reference is made at pages 24-26 of the James brief were all written after the Muskogee hatchery had been in full operation and therefore refer to those operations, as is admitted by Respondent James. Unless these pages are consistent with the operations as there conducted they mean nothing. Lieber, the only witness, except Hastings, who knew how the incubator operated, testified that the eggs were arranged in separate chambers according to their ages and the temperatures of the chambers were carefully controlled by the dampers and successively graduated. As we noted in our main brief (p. 64-65) everything which appears in the file history following Muskogee is consistent with this operation.

On page 25 of the James brief, counsel have cleverly woven together isolated passages from the Hastings brief on appeal so that, when read in juxtaposition, these pas-

sages seem to foretell the Smith process. The quotations from the brief on appeal are separated by stars indicating omission of intervening matter. When the original brief is read, however, and these selected passages appear with their intervening context, no one, without supplementing the knowledge of 1913 by the Smith invention, would perceive that it was intended there to describe the setting of eggs in staged incubation as it is practiced in the Smith invention.

The words "eggs at all stages of development" in the Hastings brief in reality refer to the stages of development in which any group of eggs in a single chamber may be at any given time, and when we understand that Hastings had seven separate and distinct chambers, each of which contained eggs of one age (but the different chambers contained eggs of different ages), the entire brief takes on its proper significance and acquires a different meaning from that imposed upon it by Respondents.

One of the passages omitted by counsel for James shows conclusively that Hastings' only conception for combating the heat due to the advancement of incubation was by a forced draft of air. If he had had any conception of combating the rise in temperature by intermingling the eggs in varying stages of development and subjecting them to the same draft of air, he would have said so at that point or at some other point in his brief.

The omitted passage to which we refer begins at the bottom of page 753 of the James record:

> "In a large collection of eggs in which incubation has started the temperature at the center of the collection will be raised very much higher than the temperature nearer the bottom and sides of the collection, from which it appears very clear that the reason for the success of the small incubator with its single layer of eggs is due to the fact that with such a small egg chamber uniform conditions are more easily maintained and it is only necessary to watch the condition

> of the particular horizontal air stratum in which the eggs are located. Such ideal conditions cannot, however, be maintained in a large incubating chamber containing many superposed layers of eggs. The simple way in which applicant overcame the difficulty was through the provision of a mechanically operated air forcing means which would force a rapid circulation of air through the whole collection of eggs in the chamber and past the heater."

It is quite evident from this passage that Hastings was here referring to a chamber in which the eggs were of one age and that the "simple way" in which Hastings sought to combat the rise in temperature was *the application of the forced draft alone.* He expected the forced draft to accomplish this purpose upon a large mass of eggs all in one stage of incubation. He had no conception of combining staged incubation with forced draft, otherwise he would not so clearly and distinctly have placed his entire reliance upon the forced draft. This is further borne out by the fact that in both the "Poultry Culture" article (James R. p. 1115) and in the Hickox' paper (James R. p. 1121) the use of forced draft only is described as the means employed to counteract the heat in an incubator chamber.

This is exactly what the Examiner in the Patent Office said:

> "In the device under consideration applicant has supplied an electric fan in an ordinary type of incubator" (*James* R. p. 748).

And the Examiners-in-Chief, after reading the brief filed in support of Hastings' claim of invention, affirmed the Examiner's rejection of the application, saying that nothing more was presented

> "than would be found in the Day incubator if a fan were supplied to give better ventilation" (*James* R. p. 760).

No attempt is made by Respondents to explain away these statements in the Hastings brief which clearly d-

scribe the modification of temperatures for the different chambers in the actual operations at Muskogee (p. 65, Petitioner's Main Brief) and no effort to reconcile the operations there described with the contention that at Muskogee Hastings practiced the Smith invention.

At page 12 of Respondent Hall's brief, attention is called to the fact that Church and Church, able patent counsel that they were, "made no effort to claim for him" (Hastings) "that feature in association with eggs in staged incubation." Respondent then goes on to say "not only that combination but its various advantages were clearly disclosed to them". Nothing to substantiate this statement appears in the record, and we may rest assured that staged incubation was not disclosed to Church and Church for (1) they never claimed it as they certainly would had Hastings disclosed it to them—they would not have failed to make this the basis for a claim and an argument for invention; (2) no one from the office of Church and Church was called to testify to this vital feature of the case, and none of the "mass of data and information derived from a practical hatchery of large capacity which is being operated by the applicant" referred to in the amendment of May 24, 1912 (*James* R. p. 742), was produced from the offices of these attorneys and no excuse offered for not bringing it forward.

The allowance of the Smith patent by the same Examiner who had rejected the Hastings application (James R. p. 749 and 796) shows that the Patent Office recognized the invention when Smith disclosed the combination *including staged incubation*, but failed to find any invention in the Hastings application, arguments or briefs which are said by Respondents to disclose that same combination. The assertion of Respondents' counsel that Hastings' application would have issued had the Patent Office taken the same view that this Court did in regard to the Smith invention proceeds from the unwarranted assumption that the Hastings application discloses the Smith invention.

Lacking wholly the disclosure of staged incubation (and indeed the disclosure of adequate circulation of air) the

Hastings application is not a "constructive reduction to practice" of the Smith invention and, consequently, the ruling of this Court in the case of *Alexander Milburn Co.* v. *Davis*, 270 U. S. 390, 401, has no application whatsoever. Furthermore, the passages which are relied upon by Respondents are in the arguments accompanying the application and would not have appeared in any patent issued on the Hastings application.

Counsel for Respondents urged at the hearing that the file wrapper should be considered as a complete anticipation without regard to the process which Hastings actually carried on, contending that the doctrine of *Alexander Milburn Co.* v. *Davis, etc., Co.*, should be enlarged to such an extent as to give to arguments in the file wrapper of the Hastings application the same force and effect as was given to the disclosure in the Clifford patent in that case. There is, however, an essential and vital difference between the Clifford application and the Hastings file wrapper. The Clifford application subsequently issued as a patent. The Hastings application was *abandoned* and the arguments contained therein reposed in the secret archives of the Patent Office until produced for the purposes of the Smith litigation. The contents of the Hastings file wrapper were not revealed to the public until the trial of the *Wolf* case in 1923, and were just as secret and closely guarded as if the application had never been filed. In the case of *Milburn* v. *Davis* it was suggested by this Court that "if Clifford had written out his prior description and kept it in his portfolio uncommunicated to anyone", his earlier conception would not operate as a bar to the Whitford patent, but that as he went ahead and made it public as soon as he reasonably could, the subsequent publication of the Clifford patent made the disclosure in the application a valid reference effective from its filing date. The file wrapper of the Hastings' abandoned application was as closely guarded from the public as if he had kept it in his portfolio.

The force to be given to abandoned applications was settled very early by *The Corn-Planter Patent Case*, 23

Wall. 181. The pertinent passage from the decision is quoted on page 62 of our main brief. In that quotation, the very distinction upon which we rely was pointed out by the Court when it said:

> "Had a patent been actually granted * * *, it would have been different."

The only use to which an abandoned application can be put is as corroborating other evidence of an actual use. This Court said: "But a mere application for a patent is not mentioned as such a bar. It can only have a bearing on the question of prior invention or discovery" (p. 211).

We do not believe that this Court intended, by the *Milburn-Davis* decision, to upset the practice established by the *Corn-Planter Case* and followed for over sixty years. If this Court were to sustain the contention of Respondents that the file wrapper is sufficient in itself to anticipate Smith, then the *Corn-Planter Case* would be overruled and the defendant in any patent suit could, by the introduction of the file wrapper of an abandoned application, make the same plea. The injury which would result is evident; any patent would be subject to attack from argumentative statements contained in abandoned applications and the beneficial results of the *Corn-Planter Case* would be lost.

Apart from this, however, is the fact that the passages from the Hastings file-wrapper read upon an operation wholly different from the invention in litigation, and therefore it is necessary to conclude that the file-wrapper fails to set forth the invention with sufficient clarity to enable one skilled in the art to practice it, even were the fact of its abandonment overlooked. The test is whether one skilled in the art, at the date the Hastings application was pending and without knowledge of the later invention of Smith, would be led by the arguments in the Hastings file wrapper to practice the Smith invention. We think not, and our conclusion to that effect is supported by the fact that Hastings actually practiced a wholly different method.

The Muskogee Incubator.

The James brief proceeds upon the theory that proof of the one-time existence of the Muskogee incubator and of the attempt to operate it is all that is required to anticipate Smith. The multitude of witnesses who testified that it failed disastrously for all those who had anything to do with it, is regarded as a matter of no consequence.

It is admitted that the exhaust fan incubator was a failure but the only contemporaneous photograph (Ex. 26-C) which shows a fan shows this same fan.* The Court is asked to compare this photograph which is opposite page 34 of the James brief with the blower fan shown in the two recent Hastings drawings opposite page 33. In the photograph the exhaust fan is shown blowing directly toward the first chamber whereas in the drawing the blower fan is shown delivering to a passage at the rear of the row of chambers. The drawing cannot be an accurate representation of the construction for it disagrees in every respect with the photograph.

As we pointed out in pages 51 to 52 of our main brief, there is no proof whatever that the blower fan was ever purchased, much less installed. Respondent James insinuates that the offer made by Taggart to purchase the fan from Lieber upon the latter's representation that it was a true relic, was for the purpose of suppressing evidence. This offer by Taggart to purchase the fan occurred in 1926 (James R. p. 663) after the Hastings defense had been made a public record in three litigations on the Smith patent. Also, if Smith had desired to suppress evidence of Hastings' prior efforts he might have made such a deal with Hastings when the latter called at Smith's Cleveland office in 1917 on his way to Tiffin, Ohio, when Hastings offered to "co-operate" with Smith for a consideration (James R. p. 576 to 577). The explanation of Taggart is logical and rings true; there was nothing irregular or culpable in attempting to collect the evidence of this prior

*All of the publications which illustrate a fan show this same fan.

failure which had been rejected by five separate tribunals before the offer was made. At that time Taggart was thoroughly justified in regarding the Hastings incubator and everything connected with it as merely an interesting antiquity.

The photograph (Ex. 26-F) opposite page 36 of the *James* brief, and its caption (which is not on the original exhibit and is entirely misleading) well illustrate the extremity to which Respondent James has been forced in the attempt to support the oral testimony of Hastings that he set eggs of different ages in the same chamber. This photograph was not taken during the period when the incubator was in full operation but was taken during January, 1912. The hatch shown there is the so-called "demonstration hatch" referred to on the third page of the "Poultry Culture" article of February, 1912 (James R. p. 1298-A), and shown in the photographs on the first page of the same article (James R. p. 1115). Hastings made this very clear (James R. p. 556).

> "That is the demonstration hatch which is illustrated in this photograph appearing in Poultry Culture. That is the same hatch which was illustrated in the photograph* appearing on page 88 of this scrap book, at the left except that it is a separate photograph. One is taken with myself, and the other with my assistant employee. They were taken on the same day. The photographs show them to be of the same hatch, with a different man shown in the picture.
>
> Q. How were the eggs set in this hatch—set all at one time?
>
> A. They were hatching all at one time.
>
> Q. And were they set all at one time?
>
> A. I think my answer is sufficient—they were hatching at one time."

At the date this photograph was taken there were no eggs in any other part of the incubator; "the other trays shown in this photograph were all empty" (James R. p. 557). This

*Offered in evidence as Exhibit 26-F (James R. p. 527).

photograph and the facts in connection with it, instead of contradicting the theory of operation of the Muskogee incubator for which we have contended, actually supports it. To demonstrate the incubator, Hastings set one batch of eggs at one time in a single chamber and brought them to hatching at the same time. He therefore had no conception of staged incubation, for, had he conceived that staged incubation was a necessary feature of his invention, he would not have been satisfied with a demonstration which consisted in hatching one group of eggs set at one time.

Photograph Exhibit 26-D (marked Figure 5)* between pages 36 and 37 of the James brief does not prove that eggs were set in staged incubation as alleged by counsel for James. This photograph was alleged to have been taken under Hickox' direction at about the same time as the remaining photographs (James R. p. 592). Therefore, Exhibits 26-D* and 26-F are of the same batch of eggs. As stated by Hickox (James R. p. 597), this was "within the latter part of the year 1911 or the early part of the year 1912, very soon after the 1st of January, 1912, if it was in that year". We have shown above that the photograph Exhibit 26-F was taken of the so-called "demonstration hatch" in January, 1912, in which the eggs were all set at one time. Photograph Exhibit 26-D shows the same batch of eggs as the chicks begin to appear. *The eggs which are shown unbroken in this photograph are of the same age* as those from which the chicks are shown emerging. Chicks do not hatch simultaneously from a batch of eggs and that explains why only a few chicks are shown in the photograph Exhibit 26-D while more chicks are shown in Exhibit 26-F. Even if Hickox were in error as to the date when photograph 26-D was taken, the fact that only a few chicks are shown is no indi-

*It should be noted that Exhibit 26-D (James R. p. 1127) consists of two photographs. We are here referring to the one at the *bottom* of page 1127 of the James Record.

cation that the other eggs shown in the photograph were of a different age. The caption on the photograph, "stage incubation in a stack" (which is not on the original exhibit) is therefore misleading.

The photograph, Exhibit 26-D, following page 34 of the James brief, shows conclusively that Hastings hatched only in one chamber.* This was taken in the midst of the hatching season and the hatching trays (those with high sides in the background of the photograph) all were confined to the last chamber of the row.

Hickox went into great detail as to the taking of these photographs. He placed his initials upon all of them at the time of the taking of the testimony, and asserted that they were all "taken on one day, within a couple of hours" (James R. p. 597). As noted above, the Exhibit 26-F photograph which bears his initials was taken at the time of the "demonstration hatch". Also, the photograph, Exhibit 26-C, opposite page 37 of the James brief, showing Hastings in the act of inserting a tray in one of the compartments, according to Hastings was "probably taken about the same time as the demonstration hatch" (James R. p. 561), a fact which is true because this photograph was reproduced on the first page of the "Poultry Culture" article of February, 1912 (James R. p. 1115).

Obviously, these photographs were not taken at the same time as the photograph Exhibit 26-D following page 34 of the James brief, and Hastings confirms this for he testified that this latter photograph "was obviously taken later in the hatching season" (James R. p. 561).

Respondent James admits, on page 39, that perhaps there were different temperatures in different chambers and says that the commingling of the air from all of the chambers would bring them to a uniform temperature. This, of course, is a contradiction in itself and cannot be done because the 5,000 eggs in each chamber will affect

*We are here referring to the photograph at the *top* of page 1127 of the James Record.

the temperature within the chamber to a marked degree. Furthermore, it is not what the record says. Hastings had the individual dampers at the top of each chamber and "a thermometer in each compartment, and with the valves or cut-offs he would get the amount of heat that he needed in each compartment to make it the temperature he wanted" (Lieber, James R. p. 777). The amount of air entering each chamber could be controlled and it was Hastings' intention to regulate and progressively increase the temperatures in the several chambers by adjusting the dampers, just as the temperatures of two rooms can be varied by opening windows to a greater or less extent.

The attempt to find a parallel between the disclosure in the Smith patent and the separate chambers of the Hastings invention (James brief, p. 41) is so cleverly deceptive that it merits answer. In Smith, behind each curtain is an open space holding eggs in the different stages of incubation and the air passes by all ages of eggs before it is returned to the fan. This is also the method of operating the James incubator. There is nothing in either the Smith patent or the James incubator which segregates the eggs by ages and subjects each age to different air temperatures.

Respondent James has attempted to establish that the operation to which Lieber testified, namely, the segregation of the eggs in accordance with their ages in separate chambers and the progressive variation in temperature was "experimental" and was tried out only at the start of the operation. This is not what Lieber said, however. Lieber said in the Stone case that if Hastings had only a few eggs he would operate his incubator "*as the ordinary small incubator*" was operated but that if he was running to capacity "it would be necessary to transfer the eggs of a certain stage of incubation all into one compartment" (James R. p. 782) and in testifying in the James case Lieber said: "when he had a few eggs, he might set all the eggs in one compartment" in which case he regu-

lated the temperature as incubation progressed in accordance with the age of the eggs. "He would have to keep the temperature at different stages according to the age of the egg" (James R. p. 627). In either case, Hastings practiced the progressive advancement of temperature, for in his conception, it was "necessary because when eggs when first placed in an incubator they required the maximum amount of heat, whereas a few days before they hatched the chicks in the eggs furnished considerable heat, and therefore it was not necessary to supply as much artificial heat just before the chicks hatched. • • • He gave this as his reason for having to have the device so that it would have one temperature in one compartment and a different temperature in another compartment. • • • And that is my recollection today" (James R. p. 628). Lieber was very positive that "the incubator was constructed so that each separate compartment could have the temperature desired" (James R. p. 780). *Lieber was defendant's own witness,* and that he *knew* what he was talking about is beyond question, for he said:

> "I was right there every day. Not all the time, of course. I was in and around the place there; had my office right on the same lot" (James R. p. 615).

This Court is warned that the references to pages 517-518 and 535-536 of the Record on page 38 of the James brief where it is said that Lieber supported Hastings' testimony that Hastings set eggs of different ages in the same stack, *is not the testimony of Lieber. This is Hastings' tetimony.* The reference to page 782 of the Record has been disposed of above. At that point Lieber did not say that Hastings set the eggs in staged incubation in a single chamber. **There is no support whatever in the Record for the testimony of Hastings on this vital point, but many contradictions among which are the following:**

From the testimony of Lieber in the James' Record, page 603:

"the seventh compartment, I might state right here, was not necessarily for hatching but to take the chickens off when they had been hatched • • • and the intake or top of the compartment had a valve you would call it, just a slide so he could regulate the amount of air that went in there. *He could enclose it off entirely if he wanted to, or open it wide open, so that he could regulate the amount of heat he had in each compartment.*"

(P. 604-5:)

"Now, the space on the drawing that has the ink line with the letter 'R' on it, that is the 'valve' you would call it, or 'regulator' to regulate the amount of air that was let into a compartment. On the top of each compartment there. With that slide arrangement so that that hole in the top could be closed or opened as you wished—just according to the amount of air that he wanted in each compartment."

(P. 626:)

"but I remember it was a 30,000 egg incubator, six (6) compartments at five thousand (5,000) each, and one (1) compartment that he used to take the chicks off in, *because he had to have different temperatures in each department*" (compartment).

(P. 627-8:)

The testimony on these two pages is all pertinent. The following extracts will suffice.

"The purpose of those shutters or those slides at the top of each compartment was to let the amount of heat that he wanted into each compartment, to keep it the proper temperature. That is to say, *that kept each compartment at a different temperature, according to his idea about hatching.* When the eggs were in one stage of hatching they were set in one compartment,

and then moved to another, and then moved to another. . . . . .

He kept the temperature of the compartments at a different temperature according to the age of the eggs, according to what the standard was, or what the temperature of the eggs should be at a certain period of their hatching. And then he moved the eggs over to the last compartment at the time the chickens were hatched. . . . . .

And he adjusted those slides so more or less hot air would go into each compartment, to control the temperature. The temperature of the different compartments was different. My recollection is that the temperature varied about ten degrees from the starting to the end. . . . . . .

He had valves or cut-offs connected with each of these sections, or compartments, by which he could regulate the heat of the air in each section or compartment. He could have one temperature in one compartment and a different temperature in another. . . .

He gave this as his reason for having to have the device so that it would have one temperature in one compartment and a different temperature in another compartment."

(P. 777:)

"There was a thermometer in each compartment, and with the valves or cut-offs he would get the amount of heat that he needed in each compartment to make it the temperature he wanted."

(P. 780:)

"between the air conduit 'H' and each egg chamber was a cut-off or valve, by which *the heat in each separate egg chamber was regulated.* . . .

There was a space between the egg chamber and the top of the building. My recollection is that it had a

little door just above each compartment which he could open and with his hand push the cut-off or valve either way."

(P. 782:)

"If he had only a few hundred dozen, he could incubate them all in one compartment, whereas, if he had many eggs, *it would be necessary to transfer the eggs of a certain stage of incubation all into one compartment.* In other words, it was fixed so that it could be operated as the ordinary small incubator, used in the homes. Or would be operated on a large scale."

From the "Poultry Culture" Article (James R. p. 1115-1116).

In the second column of this article appears the statement, "During hatching, trays with higher sides are placed on alternating tray slides, thus requiring two compartments for hatching the twenty trays incubated in one". This statement is wholly inconsistent with Hastings' testimony that he hatched eggs in all of the compartments. It is consistent with Lieber's testimony.

Again at the bottom of the last column of page 1115 of the record, and on the top of the first column on page 1116, the following appears:

"Although the difference is less marked than in the dead air machine it is to be expected that varying degrees of air temperature will be required in heating (or cooling) eggs in varying quantities and different stages of incubation. To accommodate this need, the inventor has ingeniously arranged that the air be divided, after it leaves the fan, into two flumes. One of these passes the heater and the other does not. Into the ceiling of each compartment slide dampers open from either flume, so that by opening the two in proper relative proportions any temperature desired may be attained in any compartment."

In Exhibit 26-A, which is a description of the operation of the Hastings' Incubator, found in the Hickox Album (James R. p. 1121) the following appears:

"When the hatching begins, alternate trays are fitted with high sides which will require two compartments for the actual hatching out of the twenty trays incubated in one compartment." This is a repetition of the first quotation from the "Poultry Culture" article above.

Respondent James is bound by Lieber's testimony and it shows conclusively that Hastings operated each chamber, whether the entire incubator was filled to capacity or not, just as the old single stage incubators of the prior art were operated, with all of the eggs in a chamber of one age, and with progressively increasing air temperatures as incubation progressed (James R. p. 51-52). In other words, Hastings did not practice the Smith invention for he did not avoid the difficulties of the prior art which arose by "the necessity of varying, by nice adjustments, the temperature of the applied air, so as to conform to the varying temperatures of the eggs as they passed through successive stages of incubation" (Smith v. Snow, 294 U. S. 1-7).

The experience of the art since the advent of the Smith patent has taught that in egg chambers of the capacity which Hastings employed, it is impossible to secure successful results by the Hastings method.

Each of the individual chambers of the Hastings incubator held 5,000 eggs. This is approximately double the capacity of one of the egg chambers of a Jamesway incubator, so that any difficulties in maintaining proper incubating temperature in the individual chambers would be greatly increased in the Hastings incubator over the Jamesway incubator. In addition, the fact that in the Hastings incubator an air speed of 30 feet per minute was employed while in the Jamesway the average is 135 feet per minute with much higher speeds at various points, makes the regulation of temperature in Hastings more difficult.

Yet we find that in a Jamesway egg chamber with half the egg capacity and with more than four times greater air speed, the temperature cannot be controlled unless staged incubation is used. Jamesway instructs its operators to set the cabinet at intervals of 3½ days with approximately one-fifth of the whole capacity at a setting (James R. p. 86), and the operator is warned that unless staged incubation is followed disaster will result. Jamesway says:

> "Do not leave the cabinet full of eggs of the same age as, after the tenth or twelfth day, enough animal heat will be created so that you cannot keep this cabinet down in temperature" (James R. p. 96).

With this present-day knowledge, let us project ourselves back to the Hastings incubator at the time of the picture Exhibit 26-D between pages 34-35 of the James brief. Each of the cabinets or chambers is filled with 5,000 eggs. The eggs in cabinets 4 to 7 have reached or passed the "tenth or twelfth day". The doors are closed and the only air received is through the inlet at the top of each chamber and a feeble current of 30 feet a minute is trying to penetrate the mass of eggs. Each egg is giving off heat and, in the more advanced chambers, the eggs may reach as high as 109° (Ex. 4-A, James R. 677). There are no cold eggs in chambers 4 to 7 to absorb the heat, and no air current vigorous enough to overcome the heat waves rising from these closely packed eggs, each a miniature furnace in itself. Hastings could not have maintained the uniform temperature essential to successful incubation. A few chicks may have survived, but the average secured under those conditions had to be well below the range in which commercial success was possible. It is no wonder that Hastings' customers received such poor returns and that Hastings became discouraged (James R. p. 536) and that he abandoned his incubator, and that those he left

behind gave up after one attempt to operate the incubator the following year.

It is impossible to reconcile our brief and the James brief as to the success, or lack of success, of the Muskogee incubator. In fact, it is difficult to recognize that these briefs refer to the same thing. In the James brief, the hatchery is pictured as a busy concern with hundreds or even thousands of happy customers bringing in eggs and taking out chicks, throughly satisfied and pleased with the new enterprise. It is difficult to reconcile this conception with the actual results or, in fact, with the testimony. On page 50 of its brief, Respondent James lists a number of witnesses to support its contention. Let's look at the record and see what the witnesses testified:

Hickox testified that he had no connection with the enterprise and no one would have "kicked" to him if the incubator had not worked properly (James R. p. 598).

Peabody testified (James R. p. 601) "Whether it hatched eggs or not that would be something that would not come to me."

Lieber was so thoroughly disgusted with the whole enterprise that after it was all over he would have nothing more to do with any incubator whatsoever. His experience with the Hastings incubator soured him on all incubators—"one was enough for me" (James R. p. 631).

Pitts testified that the percentage of hatch was very low and "he didn't have very good chicks and the chicks that were hatched were rather weak" (James R. p. 637).

Brewer did not know whether the chicks he received were hatched from his own eggs or supplied from

other sources and consequently he knew nothing of the percentage of hatch secured (James R. p. 641).

Campbell "thinks" the incubator was a success, but he did not know how many chicks his parents received, or the percentage of hatch (James R. p. 642).

Cory's experience was disastrous. He never received a single chick from three or four lots of 100 eggs each. Hastings gave no excuse except that "they didn't hatch"; it was a "complete failure" (James R. p. 645). Respondent's excuse for this is that Hastings stole Cory's chicks (James Brief, p. 45).

Shanafelt, an experienced poultryman, received a "very poor hatch" (not more than 7 chicks from 200 eggs) in his one experience with the incubator (James R. p. 648), and testified that the poultrymen around Muskogee "were very much disappointed" with the results Hastings obtained. They had been led to believe that the Hastings hatchery would be a very valuable addition to the enterprises of the town of Muskogee, but they were doomed to disappointment (James R. p. 649).

Ward's testimony is that Hastings never got over 50% hatch. In other words, Hastings' high point was 50%—not his average as Respondent James would have it believed. His average must have been very low if 50% was his high (James R. p. 657).

Anderson took from 150 to 200 eggs to the Hastings hatchery, and got 5 chicks. He said, "I got disgusted and quit" (James R. p. 769) because he took fertile eggs to the hatchery and received no results (p. 770).

Hogan took a few chicks in payment for cleaning some clothes but knew nothing about the results secured at the hatchery (James R. p. 787).

Hastings said that he was "discouraged with my work" (James R. p. 536).

Finally *Hastings*, testifying in Canada, admitted "The hatching records as a whole for that plant were not high and there were many individual cases of very poor results. I should judge that the hatching record of the whole would run around 40 per cent." (Appendix, p. xxxv).

In addition to which we have the mute but very persuasive evidence of the abandoned incubator itself, destroyed after one attempt to operate it in the year following Hastings departure.

Of course, the object of the invention is to improve upon the hatching results obtainable with old style incubators. There is no evidence that Hastings did so. Smith did (294 U. S. 1, 7).

Answers to Miscellaneous Points in the Brief of Respondent Hall.

The brief filed on behalf of Respondent Hall is full of many references and quotations to matters not in any record before this Court. Certainly Petitioner was not required to make any reference to such matters in his main brief and should not be required to make any reply now to matters *dehors* the record.

The Cooley Record.

The most aggravated departure from the record consists in frequent references to the record in the case of *Buckeye Incubator Co., et al.*, v. *Cooley*. From reading Respondent Hall's brief one would gather that the entire Cooley record had been introduced by counsel for Hall as Defendant's Exhibit F. This is not the fact.

The facts with regard to the *Cooley* record are as follows:

Prior to the trial of the Hall case counsel entered into a stipulation (Hall R. p. 164-5)

> "that certified copies of testimony previously taken in other cases upon the Smith patent, to wit:
>
> *Buckeye Incubator Co., et al.*, v. *Cooley*, D. C. N. J.
>
> • • • • • •
>
> relating to the so-called 'Hastings prior use' may be offered by either party and received in evidence in the instant case with the same force and effect as though it had been taken herein."

At the trial a selected portion only of the record was offered in evidence as Defendant's Exhibit F. This portion of the record consists of pages 258-295 of the Cooley record (Hall R. p. 51). *This was all that was offered.* As is further shown by the discussion on page 51 of the record and by the findings of fact by the District Court, these pages contained the file of the abandoned Hastings' application and *nothing more.** The Court said:

> "Subject to plaintiff's exception, the abandoned application with the accompanying file wrapper is received in evidence as Exhibit F." (Hall R. p. 216.)

In the James record certain other portions of this Cooley record were offered and received in evidence (James R.

*The file wrapper as it appears in the Hall record, has at some time been mutilated. The file wrapper in the James record is a reproduction of a photostatic copy of the original document taken from the Cooley record. The document presented by respondent Hall as Exhibit F has been copiously underlined. This underlining constitutes an alteration of the original file wrapper changing it from the true certified copy it originally was, as is shown by the paster attached to it and by a comparison of the corresponding pages as they are reproduced in the James record.

p. 581), but that offer did not include the testimony of the witness, Chambless, or the testimony of Davis (given in the Cooley case).

The unwarranted references to and quotations from the testimony of Chambless are scattered through Respondent Hall's brief to such an extent that it is practically impossible to delete them and leave the accompanying portion of the brief readable.

The following is a specification of the portions of the Hall brief referring to testimony of Davis and Chambless which is not in any record now before this Court:

All of that portion of page 4 of the brief which refers to the building of the Cooley incubator and the making of the drawings. (Cooley Ex. D-D.)

The statement that Defendant's Exhibit F contains anything other than the abandoned file wrapper (p. 13).

The references to pages 365-371 of the Cooley record (p. 16 of the brief).

The references to the testimony of Chambless at page 17 of the brief.

The entire quotation of Chambless' testimony and the comment thereon on pages 19 and 20 of the brief.

The reference to and quotation from the testimony of Chambless at page 21 of the brief.

Other References to Matters Not in the Record.

Respondent Hall's brief also contains references to many other alleged facts for which there is no support in the record.

An attempt to identify certain objects in the photographs forming a part of "The Million Egg Incubator" is found on page 21. There is no testimony in the present records as to the photographs or the objects shown in them for

the photographs were not referred to by any witness in either case.

The statement appears at page 24 that counsel "informed the Court below that we made a diligent search for Orvis, Miller and said helper with the result that we were credibly informed that they were dead." No such statement appears on the record, and we deny that it was made. The statement that Orvis was dead and the statement that Miller was dead (no reference is made to the helper) appeared for the first time in "Assignment of Errors on Appeal" on page 229 of the record. When counsel was confronted with the finding by Judge Hincks that there was a "dearth of evidence" which was "not without significance" (Hall R. p. 217) he tried to excuse himself by advancing a statement as to the death of these individuals, a statement now admitted (Hall Brief, p. 25) not to be true as to Orvis at least.*

The dissertation on egg temperatures at page 39 of Respondent Hall's brief is wholly without support in the record and rests in the imagination of counsel.

The reference on page 40 of Respondent Hall's brief to certain alleged testimony with regard to percentages of hatch said to have been given in the case of *Smith* v. *Le Mieux* in Wisconsin is entirely without support in the present record.

The reference to and long quotations from the *Cooley* record with regard to the alleged Smith prior use found on pages 43-44 of the Hall brief is wholly without support in the record. The Attica experiment in 1912 was testi-

---

*These facts bring in sharp relief that in neither of the cases before this Court were important witnesses who were likely to corroborate Hastings' testimony (if true) called by either respondent. In the Hall case, Orvis, Chambless, Miller and Miller's helper were essential witnesses to the Brooklyn events and should have been called but were not. In the James' case Hastain, Dierfield and Hicks were not called as to the operations of the Muskogee incubator nor was their absence accounted for.

fied to in the *Waxham* case and was before this Court (*Waxham* R. 548).

The footnote on page 16 of the Hall brief is quite pertinent and very forcibly brings to the attention of this Court that substantially the same thing as the Brooklyn incubator was in the Waxham case and was found by the Circuit Court of Appeals of the Ninth Circuit not to anticipate.

Both Lawry and Hastings sat at the feet of Madison Cooper, the cold storage engineer, and thought they had learned from him how to incubate eggs in the mass. Both copied his ideas and both duplicated his apparatus, Hastings at Brooklyn, N. Y., and Lawry at Pacific, Missouri. Both tried to hatch eggs and both failed miserably, and the wrecks of their efforts have been repeatedly used in attempts to upset the Smith patent. The testimony with regard to the Lawry incubator at Pacific, Missouri, with drawings of the incubator there constructed are found at pages 433-480 and Exhibits 7A-C in the *Waxham* record. Hastings' Brooklyn incubator was a substantial duplicate of Lawry's, except that for perforated partitions at the top and bottom of the incubating room Hastings used fabrics in simulation of these partitions which were a vital part of Cooper's cold storage device. Lawry failed and Hastings failed. Lawry's efforts were successively rejected in the *Waxham* case by the Master, the District Court and the Court of Appeals of the Ninth Circuit, whose decree was affirmed by this court.

A comparison of the drawings of the Lawry incubator in the *Waxham* record and the drawing of the abandoned application of Hastings shows the common parenthood of Madison Cooper's cold storage apparatus, and the experiences of these two experimenters were exactly parallel.

Alleged Insufficiency of Smith Patent.

At pages 30-33 of Respondent Hall's brief, the matter of temperatures is argued at considerable length. We

have already discussed this matter at pages 86 to 89 of our main brief where the facts are briefly marshalled and Respondent's contentions shown to be without merit. The meat of Respondent's argument is that, due to certain specific temperature ranges stated in the specification, the Smith patent taught the art nothing and is valueless for that reason. The profound revolution in the art of incubation which is traceable directly to Smith is a conclusive answer to any such contention.

In the art of incubation we are dealing with a subject which, since the Smith invention and due to the impetus given it by that invention, has grown by leaps and bounds. It is not unreasonable to suppose that based upon the fundamental principles of the Smith invention advances have been made. These had to do, mainly, with the major elements of incubation, *i. e.*, temperatures and humidities.

At the date of the Smith invention the recognized and recommended temperatures ranged from 101½ to 105° F., it being the practice to increase the temperatures progressively as incubation progressed (James R. p. 52). Hastings said that the Cyphers incubators of the period were run at 102½° F. (Hall R. p. 59). At that period also the humidity of the incubator was quite low as compared to present day standards. The Smith patent made no recommendation as to humidities. The recommendation in the patent as to temperature was at that day recognized as the correct temperature range, *i. e.*, "between 100° and 105° Fahrenheit approximately" (p. 1, l. 18, 19; James R. p. 673).

The only way by which one can control the temperature of the eggs is by the temperature of the air. The processes of nature are fixed, but by maintaining the air temperature within a certain range, the temperature of the egg can be kept from going out of safe bounds, either too low before the eleventh day, or too high thereafter. The Smith patent instructed the operator "to keep the temperature throughout the chamber between the limits of 100° and

105°'' (p. 2, lines 76 to 78, James R. p. 674). Judged by the standards of that day and with the humidities of that day, that was a correct range in which operations could be conducted.

In 1923, however, Taggart (connected with petitioner) began investigating the effect of increased humidities. In 1928 his company was able to make definite recommendations that the humidity be increased. It was found, however, that with the increased humidity it was necessary to lower the air temperature 1° below the low limit set forth in the patent (Hall R. p. 48-49).

Taggart's testimony, quoted on page 30 of the Hall brief, that ''even with the proper humidity 99¼° is too hot for a Smith incubator'' was given in December, 1930 (*Waxham* R. p. 480 and 604). That was after the increased humidity was a regular practice with Smith incubators. By proper humidity Taggart was unquestionably referring to the humidity which was recognized at the date of his testimony as the best or ''proper humidity''. His testimony is therefore entirely consistent with the testimony which he gave in the Hall case when he said:

> ''As we have increased the humidity, changed the humidity, we have also changed the temperature so that at the present time in the Smith we recommend a temperature of 99° F. in the air.'' (Hall R. p. 46.)

There is a definite relation between humidity and temperature (Hall R. p. 48) as is readily understandable by the effects upon human beings of differences in humidities at the same temperature.

The testimony of Taggart on pages 47-49 of the record that in the days before higher humidities came into vogue the temperatures recommended in the Smith patent were actually used is uncontradicted in the record.

That such temperatures were entirely practicable and operative before and long after the date of the Smith patent is evident by the facts stated by this court in the Snow opinion (294 U. S. 7). Smith successfully operated his incubators from 1915 on (James R. p. 128); and his licensee, The Buckeye Company made and sold licensed incubators from 1917 on. Both Smith and his licensee made incubators of millions of egg capacity and they were successfully marketed and used by him and the customers of himself and his licensee for years with the temperatures set forth in the patent.

If one today would wish to go back to the lower humidities which were used at the date of the patent he could operate the same incubators practicably and successfully, at the temperatures stated.

The statement in Hall's brief (p. 40) that this Court and others have been deceived about the facts of temperatures is wholly unwarranted. The testimony of Taggart has been consistent throughout all of the cases. A comparison of the heat chart (Ex. 13 in the Hall case) with the corresponding charts in the Snow and Waxham cases (Exs. 3 and 4 in said cases, respectively) shows the identical heat curve.

We think this Court had in mind in the statement that the eggs reach "their highest temperature about the 17th day" (294 U. S. 5), the statement contained in the Smith patent that the eggs in the lower tilting trays, which are from fifteen to eighteen days in age, present the most difficult problem in combating excess temperatures. This statement is found on page 2 of the patent, lines 64-73 (James R. p. 674). Smith pointed out that the embryos within the eggs are in their most precarious condition from the fifteenth to the eighteenth day. After the eggs pass this point safely, the embryos are not so readily affected by differences in temperatures.

The preceding paragraph is an effective answer to the claim of non-infringement based upon the eighteen-day operations carried on by these Respondents. Respondents do not remove the eggs from the environment of the Smith invention until after this critical period has passed. In the operation of the hatching chamber by the Respondent Hall, the temperature is allowed to drop to 98° F. (Hall R. p. 64). In the operation of the James incubators the temperature in the hatching chamber is allowed to rise to 104° (James R. p. 331). This spread in temperatures at which these two Respondents operate their separate hatching chambers shows conclusively that an exact temperature is not a vital matter after the eighteenth day, but exact temperature *is* a vital matter before the eighteenth day and for this reason both Respondents use the Smith invention when they need it and discard it only after they can safely dispense with it.

Infringement.

Air Currents.

Respondent James seeks to avoid infringement upon the theory that he employs no current movement of air. The tests and charts which were made (James R. p. 686-710) conclusively show powerful air current movement equal to the current movement in the Smith machine. At a few spots the current is not more than 30 feet a minute, but these spots are confined to small areas in three trays only. In every other part of the incubator the air is moving in a positive stream and at most points at great velocity. Provision is made in the James structure for this positive air stream, structural provision which would not be present unless there were to be such a positive stream. It consists of the flues at front and back of the incubator and

extending from near the top to near the bottom. They have no purpose whatever other than to receive air from the rotary fan at the top and carry that air down to the bottom so that it may come up through the eggs to the fan again. The record evidence is that in these two flues the rate of air travel is 700 ft. per minute (*James* R. p. 90).

As to infringement by Respondent Hall, there can be no question that Hall infringes for the construction of the incubators which he employs is identical with the construction of the incubator held by this Court to infringe in the *Waxham* case (Hall R. p. 44).

Staged Incubation.

Both Respondents set their eggs in equal amounts at regular semi-weekly intervals to achieve a balance between the exothermic and endothermic eggs. There is sufficient heat given off by the eggs from eleven to eighteen days to upset the even running of the incubator were the capacity set all at one time. This is well shown by the unshaded area on the heat chart opposite page 60 of Respondent James' brief. James especially warns his operators and customers that they must practice staged incubation for if they do not set the eggs as he prescribes, "you cannot keep this cabinet down to temperature" (James R. p. 60).

18-Day Operation.

It is absurd to say that either Respondent does not hatch eggs by the use of its incubators. The eggs would never hatch had they not been in the incubator 18 days, during which time they were having the full benefit of the Smith invention.

Petitioner's Contentions in Prior Litigations.

At the argument of these cases before this Court in October, 1936, the suggestion was made by counsel for Respondents that in certain of the prior litigations of the Smith patent Petitioner contended for a scope of protection under the patent different from that now sought, and that Petitioner's change in this respect operates in some manner, not definitely indicated, to make the Hastings defense more effective now than it was in those prior litigations where it was considered and rejected. Our reply to this contention is two-fold; first, that there has been no change in Petitioner's contention as to the definition of the Smith invention and the scope of protection of the Smith patent throughout the fourteen years of the litigation of the Smith patent; and, second, that if there had been such a change at one time or another in the course of these fourteen years of litigation, that would be of no consequence whatever now in passing upon this Hastings defense.

The first two litigations of the Smith patent, the *Wolf* case (291 Fed. 252 and 296 Fed. 680) and the *Cooley* case (Appendix, p. i, and 17 F. [2d] 453) involved claims of infringement by reason of the use of incubators which were substantial duplicates of the commercial Buckeye incubators made under the Smith patent. In those cases the Hastings defense was presented, and, if it was a defense at all, it was as effective then against the method claim 1 of the Smith patent as it would be today. It was rejected in both cases on the broad ground that the Hastings incubators were failures in that no useful results whatever were attained in their use, and were abandoned because they were failures, and taught the practical art nothing whatever of value about practical mass incubation. Warned by the decisions in those cases, some of the manufacturers of incubators departed from the construction illustrated

and described by Smith in one respect or another, designed, as they thought, to escape from a charge of infringement. Therefore, the subsequent litigation of the Smith patent was concerned largely with whether or not these differing constructions of the competitors of Smith and his licensee were within the scope of protection of the Smith patent. It was on the issues thus presented that conflict arose between different Courts of Appeals, with the result that the *Snow* and *Waxham* cases were taken up by this Court on *certiorari* for consideration of the conflicting decisions.

Following the *Wolf*, *Cooley* and *Stone* cases, a number of suits were determined adversely to plaintiff upon varying contentions of non-infringement. In some cases the accused incubators were held not to infringe because of the absence of a "current" movement of the air, due either to the provision of stirrers or paddles which churned or agitated the air, or to the lack of guiding partitions. In other cases, the patent was restricted to an operation in which the current of air as it left the fan struck first the hottest eggs. These contentions of the defendants in the litigations referred to found some acceptance in the Courts by which they were considered. Limitation of the Smith patent in one or the other of the respects noted obtained acceptance in the *Petersime* suit (19 F. [2d] 721), in the *Blum* suit, (17 F. [2d] 456 and 27 F. [2d] 333), in the *Hillpot* suit (22 F. [2d] 855 and 24 F. [2d] 341), and in the *Snow* suit (70 F. [2d] 564).

On the other hand, both contentions of non-infringement were definitely rejected in the *Waxham* suit by the Special Master, the District Court and the Court of Appeals. It was this conflict between the rulings of the Courts of Appeals of the Eighth and Ninth Circuits which led to the grant of *certiorari* in the *Snow* and *Waxham* suits.

Throughout all of these litigations of the Smith patent it was a contention of the plaintiff that the Smith patent was valid and was entitled to enforcement commensurate

with the definition of the Smith invention in claim 1 of the patent, namely, the method of incubation characterized by the employment in combination of staged incubation and the maintenance of a continuous definite circulation of air through the mass of staged eggs in order to effect the requisite transfer of heat from the older eggs to the newer ones and maintain continuously the required conditions of moisture and fresh air within the space around the eggs. In other words, at no time in the course of the litigation of the Smith patent over the whole of this period of fourteen years has there been any change in the contention of the plaintiff with reference to what the Smith invention is, or what scope of protection Smith was entitled to under his method claim 1.

The consideration of the Smith patent by this Court in the *Snow* and *Waxham* cases in connection with the prior art practices and publications and the Lawry prior use which were before this Court in those cases, led to the rejection of those arguments of limitation of scope and resultant non-infringement on which the defendants had succeeded in the *Petersime, Blum, Hillpot* and *Snow* cases. In rejecting those contentions, this Court adopted and affirmed the contentions which Petitioner had consistently advanced as to the nature and scope of the Smith invention, stating its definition of the invention precisely in its opinion.

But even if, contrary to the fact, there had been some change in Petitioner's contention from time to time with reference to the scope of protection of the Smith patent, that would not be an item of consequence in these present proceedings. What constitutes the Smith invention, what are its essentials, and what range of variation of structure is permissible in practicing the invention, have all been definitely determined by this Court. They are not subjects for further contention now. The sole question now is whether or not that invention was made and used or was publicly disclosed by Hastings before it was made and

patented by Smith. It is on that issue and no other that the Court of Appeals in the instant cases ruled contrary to the Courts of Appeals which passed on the *Wolf* and *Cooley* cases. The adverse ruling of the Court of Appeals in the instant cases was made with no suggestion by that Court that the Hastings defense is any more or less effective here by reason of the definition of the Smith invention given by this Court in the *Snow* and *Waxham* cases and with no suggestion of any such contention to the Court of Appeals by counsel for these Respondents. The differing conclusions by the Courts of Appeals in the *Wolf* and *Cooley* cases on the one hand, and the Court of Appeals in the instant cases on the other, is that the former concluded that Hastings was never in possession of the Smith invention and did not make use of it in his Davis and Muskogee incubators and did not disclose it in his abandoned application and his publications and failed in his efforts to practice mass incubation, whereas the latter held that Hastings did possess the invention and did put it in use and did disclose it adequately. That is a conflict of decision which has no relation whatever to contentions, harmonious or otherwise, which counsel for Smith have made in these several litigations as to what is the proper scope of protection of the Smith patent.

The Canadian Decision.

Since this case was set down for re-argument the Supreme Court of Canada has reversed the decision of the Exchequer Court, portions of which, dealing with Hastings, are contained in the appendix to our main brief. The Supreme Court held the Smith patent in Canada invalid on the Hastings' prior use at Muskogee, Oklahoma. Steps have already been taken for appeal to the Privy Council.

There are several considerations in the Canadian situation which deprive that decision of any effectiveness on the situation presented by the records here.

The primary reason the Canadian decision should not be considered at all persuasive in the instant cases, is that the record in Canada does not contain the testimony of Lieber, which, as pointed out above (p. 29-33), is directly contradictory to the testimony of Hastings on the vital question of the method of operation employed by Hastings at Muskogee. Lieber was the only witness who testified in the instant cases, except Hastings, who knew how the incubator at Muskogee operated. Lieber testified that the Muskogee incubator was operated by filling each of the seven chambers with eggs of the same age, shifting each group of eggs to the next chamber at the end of short periods, and progressively increasing the temperature in the several chambers in accordance with the ages of the eggs therein. The temperature adjustment was accomplished by adjusting the valves from the common air duct, so that varying quantities of air were admitted to the chambers. This method followed the teaching of the prior art and differed radically from the method perfected by Smith, as has been pointed out. Lieber's testimony not being in the record of the Canadian case, there was no contradiction of the claims of Hastings that he set the eggs in staged incubation in the several chambers at Muskogee.

Being without information as to the method actually employed by Hastings, the Canadian court construed the equivocal passage from the attorney's brief in the abandoned patent application as descriptive of the method of the Smith patent, whereas, had the Court been informed of the facts, it would have perceived that that passage was equally consonant with the Hastings method as described by Lieber. As the only method of operation which was described to the Court was found in Hastings' testimony, it is not surprising that this error was committed.

So, also, the writings and publications sponsored by Hastings were held to corroborate Hastings' testimony and those pertinent passages which point directly to the actual

Hastings method were either overlooked or their significance unappreciated.

The lack of adequate disclosure of the Muskogee incubator is evident from the description of the incubator given by the Canadian Court. No mention whatever is made of the slide dampers at the top of the several chambers by which Hastings controlled the amount of air entering the several chambers so as to effect the progressively increasing temperatures of the several chambers. As a result, the Court entirely missed the significance of the several individual incubating chambers. As shown by the passage: "Although seven incubating chambers are shown, it was one hatching operation all carried on in the same room," the Canadian Court considered that this division of the incubating operation in the seven chambers was without any significance and regarded the operations as a unitary one. The Court did not inquire as to the reason for dividing the installation into the seven different chambers, nor did it apparently realize that there was a real purpose and intent in the mind of Hastings in segregating the eggs by ages into seven groups, each subjected to air at different temperatures.

The Court accepted the statement of Hastings that the "conception of his invention was to 'equalize the temperature in a large room' through the means adopted and used by him", as referring to the entire installation, whereas, viewing the several chambers as one installation, the air temperature was not the same throughout. While Hastings may have sought to equalize the temperature in each chamber, his scheme was to have each individual chamber at a different temperature from every other chamber. This is a radically different conception from keeping all of the chambers at the same temperature.

The distinction is vital when we consider Lieber's testimony in the James record, in which it is shown that Hastings filled each chamber with eggs of one age, for in that

operation the old and new eggs are not subjected to one body of air at one temperature. Lieber repeatedly testified that the temperature in each chamber was different from the temperature in the other chambers and that he knew about the operations for he was "there every day" (James R. p. 615). The essence of the Smith invention is the application to the eggs in various stages of incubation, endothermic and exothermic alike, to the same body of air at the same temperature, and in the Hastings method this was neither contemplated nor performed. As we pointed out above, the testimony of Lieber is supported by the "Poultry Culture" article quoted in full on page 33 of this brief. It was written contemporaneously with the building and installation of the Muskogee incubator and is acknowledged by Hastings to be "a description of the plant as I had built it" (James R. p. 520).

Without the testimony of Lieber, this passage has no significance, but, when the true Hastings operation as described by Lieber is understood, this passage immediately assumes its proper significance.

On the vital question of setting the eggs, Hastings testified in the James case that he "inter-spaced" trays holding the fresher eggs with trays holding the older eggs and when the eggs were ready to hatch he moved them to the bottom of each chamber (James R. p. 535-536). This statement was directly contradicted by Lieber who testified (James R. p. 627): "he would put the eggs in the first one, and keep on moving them, and he would be putting eggs in the first compartment and taking chicks out of the last one at the same time. And in the intermediate compartments would be eggs further advanced in the incubation." On page 782, Lieber said: "if he had many eggs, it would be necessary to transfer the eggs of a certain stage of incubation all into one compartment." The Canadian Court did not have this testimony before it.

Instead the Court accepted the deductions made by Hastings, that as he knew about the changing thermal conditions of eggs in various stages of incubatio· "he would naturally place his eggs as they were in the various stages so that he did not have too many eggs in the latt·r stages of incubation in one general mass", as establishing the fact that he set eggs of different ages in proximity and thus subjected eggs of all ages to the same air temperature, whereas Hastings' conception was the antithesis of this operation. While Hastings may have known much about the development of heat in eggs during incubation, that is no indication that he conceived the idea of utilizing that phenomena of nature by balancing the endothermic and exothermic eggs in a single chamber.

The Canadian Court said that "Hastings' description of his apparatus and his story of his method of operation is corroborated by the witness Norman Hickox." As is shown by the record in the James case, Hickox knew nothing about incubation, and professed no knowledge of the mode of operation of the Muskogee incubator. He did testify about the pictures which he took of the outside of the incubator, but he was not familiar with its interior construction, the manner of setting the eggs or the control of the temperature. Hickox was merely the "contract agent or commercial manager" of the electric company which supplied the power and light for the Hastings establishment (James R. p. 598), and the pictures and articles written by him do not describe the setting of the eggs in staged incubation in the various chamber, nor do they refer to the temperature within the egg chambers. It is unbelievable that Hickox would retain to this day the detailed knowledge necessary to enable him to support the testimony of Hastings on the vital elements of egg setting and air temperature. With regard to the setting of the eggs, the article written by Hickox (Ex. 26-A, James R. p. 1121)

is identical with the corresponding passage in "Poultry Culture", for both articles are quite specific that the operation "will require two compartments for the actual hatching out of the twenty trays incubated in one compartment." This definitely contradicts Hastings' testimony that he hatched at the bottom of each compartment and is wholly inconsistent with his testimony that eggs of the same age were scattered through all of the compartments.

It is also stated by the Canadian Court that "The conception claimed by Hastings in the course of his evidence was implicitly disclosed in the specification written by himself to accompany his original application." Nothing could be wider of the mark, for it is quite apparent from the application itself and is admitted by Hastings (Hall R. p. 55), that the application, as prepared by him and filed in the Patent Office, contained no disclosure of "staged incubation."

This discussion of the lack of staged incubation in the individual chambers, and the careful regulation of the several chambers at different air temperatures, leads to the conclusion that the Canadian Court failed entirely to apprehend or appreciate the limitation in claim 1 of the Smith patent, that the current of air is of "sufficient velocity to circulate, diffuse and maintain the air throughout the chamber at substantially the same temperature."

The Canadian Court made extensive quotations from the decision of this Court in the *Snow* case. Upon that Court's erroneous conception of Hastings' method, based upon lack of knowledge of the actual process as it was carried out, such quotations were apposite. Had the Canadian Court had the benefit of the more complete testimony in the records before this Court, its conclusion should and, we think, would have been different.

The Canadian Court excused the financial failure of the Muskogee project, but it did not mention or excuse its operative failure. The testimony of Hastings that:

> "The hatching records as a whole for that plant were not high and there were many individual cases of very poor results. I should judge that the hatching record of the whole would run around 40 per cent" (Appendix, p. xxxv).

appears to have been entirely disregarded. This Court will probably recall that at the hearing in October, in response to a question from the Bench, counsel for Respondent James stated that a successful hatch should average 65 per cent. The operative failure which Hastings' testimony depicts was the direct and immediate cause of the financial failure. All who had anything to do with Hastings in any of his experimental installations lost everything they put into the ventures. Such consistency of failure is explainable only upon practical and operative failure due to erroneous principles lying at the foundation of Hastings' experiments.

The Court also refers to "the incidental expense of a new and untried venture", but nowhere in the records is there any suggestion that Hastings was ever subjected to any limitation of funds which affected the construction of his incubator or his method of operating it.

The Canadian Court stated "we have no reason to decide that Hastings' evidence was not trustworthy", but accepted his testimony which, in the absence of the fuller understanding of the Muskogee operations, gave the requisite color to the equivocal passage from the Hastings file wrapper. The Court appears to have been unaware of Hastings' admission that he is antagonistic to Smith (*Hall* R. p. 64; *James* R. p. 579).

Also, the Canadian Court appears not to have known of the statement by Hastings that it was not until 1918, at

Tiffin, Ohio, after he learned about the Smith invention, that he "tried out a method of hatching very much more like the Smith-Buckeye devices than I have used in the past" (*James* R. p. 577).

This opinion of the Canadian Supreme Court cannot properly be said to be in accord with the views expressed by the Court of Appeals in the instant cases or with views urged on this Court by Respondent's counsel. Here this Court is told that " 'The Dollar Hen' is an anticipation by its disclosures of the Smith patent" (James Brief, p. 19), whereas the Canadian Supreme Court dismissed it from consideration with only the passing comment that it describes "in a rough and general way what he considered his invention".

As to the Court of Appeals, its decision adverse to the Smith patent was founded primarily upon the Hastings Davis incubator. That was said by the Court of Appeals to have been "an operative success" and to have been used "during the hatching seasons of 1910 and 1911", though it was not built until February, 1911. In Canada, nothing was said about the Davis incubator except that "it is not relied on by the Attorney General". It seems reasonable to infer that those in charge of the litigation against the Smith Canadian patent considered the history of the Hastings' Davis incubator and concluded that it was useless to present it as defense material. Such a conclusion would have been in accord with that of the defendant in the James suit at bar for defendant James offered no corroborating proof in support of the Hastings' use at the Davis farm.

Comparative History of Smith and Hastings.

The history of the development of the Smith invention was laid before this Court in the *Waxham* case and also

in the *Snow* case. Brief reference to this history in comparison with that of Hastings is illuminating.

Smith started his experiments on mass incubation in the year 1906 when at Lykens, Ohio, he built a large incubator. His first ideas were that he could successfully incubate a large number of eggs by the use of forced draft alone. He placed 30,000 eggs in this incubator and received about 30 chicks. This experience bankrupted him (Waxham, R. p. 547).

In 1912, he resumed his experimentation and, still convinced that the forced draft of air would solve the difficulties, he built a 12,000 egg incubator at Attica, Ohio, equipped with a fan. He started one hatch in this incubator but never finished it (Waxham, R. p. 548). In the early part of 1913, he built a three-compartment incubator and moved it to Cleveland and operated it in 1913 and 1914. This is the incubator which was claimed in the *Snow* case to invalidate the Smith patent. This Court found that it did not because, while it employed fans in each compartment, the eggs in each single compartment were not set in staged incubation. The compartments were set at different times, so, viewing those compartments as forming a single incubator, there was of course the setting of eggs at regular intervals. But this Court held that the patent was not invalidated because "there was no staged incubation in any single compartment" (294 U. S. 16). The results were not successful. Dr. Smith testified in the Snow case that he got a 40 to 45 per cent. hatch (Snow, R. p. 138). Then Smith conceived the idea of setting the eggs in the individual chambers in "staged incubation" as defined by this Court and increasing the fan capacity in the chambers. He first hatched by this new method in 1915. His success was immediate and certain. The addition of staged incubation was the final touch. It turned failure into success.

At the end of 1915 season, Cugley, president of the Buckeye Incubator Company, heard of the remarkable results Smith was securing and went to Cleveland to examine his incubator and witness its operation (Waxham R. p. 518). The following year that company made some experimental machines and then negotiated the license under which it has since operated. Later, Smith organized his own company and has been successful ever since in a very great measure.

The point which we are attempting to make by this brief history is that there is no excuse which can condone Hastings' failure, judged by Smith's history. The rich reward which fell to Smith would have fallen upon Hastings had Hastings solved the problem of mass incubation.

The situation of Smith in 1913 and 1914 is exactly parallel to the situation of Hastings at Muskogee in 1912. Each had separate egg chambers, each had means for creating a circulation of air. Smith's was probably more efficient. Each set the eggs in a single chamber at one time. Each got about 40% to 45% hatch. At this point each was a practical and operative failure. But Hastings was discouraged and stopped while Smith persisted. Smith conceived the brilliant idea of combining the setting of eggs in staged incubation in a single chamber with forced circulation of air for maintaining the proper conditions of temperature, moisture and fresh air. Immediately his difficulties were over. Had Hastings achieved that idea, he would have reaped the fortune which came to Smith, for he lacked none of the publicity which would put financial support at his disposal had he been able to show that he had solved the problem.

The saying, "by their fruits, ye shall know them" is no more aptly illustrated than by this brief comparison. Comparison of the practical results of Hastings and Smith must be convincing that Hastings lacked something and it was

the lack of that final touch of genius that accounts for the failure of all of Hastings' efforts.

Respectfully submitted,

CHARLES NEAVE,
DEAN S. EDMONDS,
ALBERT L. ELY,
Counsel for Petitioner.

New York, N. Y.,
March 31, 1937.